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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,087

10/04/2005

Dongping Tao

434B-291

4135

1009

7590

11/13/2008

KING & SCHICKLI, PLLC
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EXAMINER

TAI, XIUYU

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

11/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,087	Applicant(s) TAO ET AL.	
	Examiner Xiuyu Tai	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/19/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. As for amended claims 18 and 19 filed on 8/29/2008, under PCT Rule 13.2, although claims 1-11 and claims 18-19 share the special technical feature, this special technical feature (i.e. an apparatus for separating particles by charging particle) does not define a contribution over the prior art, such as U.S. 6,723,938. Therefore the restriction is appropriate. Amended claims 18 and 19 will be further withdrawn from consideration under PCT Rule 13.2. Claims 1-11 will be examined on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 5, 7, 9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Yan et al (U.S. 6,797,908).

4. Regarding claim 1, Yan et al disclose an electrostatic classifier and separator. The device comprises: (1) a housing 17 (i.e. chamber) including opening 20 (i.e. inlet) for receiving particulates materials 16 (Figure 1; col. 7, line 63-65) and gap 25 (i.e. outlet) for directing particulate materials into containers 27 (Figure 1; col. 7, line 47-50); and (2) a first drum separator section 14 having a rotary body 55 for separating and

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charging particles (Figure 3B; col. 10, line 5-10). Yan also teaches that particulate materials are directed onto the outer drum surface 54 of the rotary body 55 (col. 10, line 3-6). It is inherent that the outer surface of rotary body 55 is non-permeable to particulate materials 16. The reference teaches every structural element as cited in the instant claim.

5. Regarding claim 2, the rotary body 55 has a cylindrical-shaped body (col. 10, line 6-7), reads on the instant claim.

6. Regarding claim 4, as shown in Figure 1, the open 20 is located on the top of the housing 17 while the gap 25 is on the bottom of the housing 17, reads on the instant claim.

7. Regarding claim 5, a splitter 18 is provided downstream of the rotary body 55 to collect separated fractions 75 and 76 (Figure 3A; col. 12, line 34-35), reads on the instant claim.

8. Regarding claim 7, the reference teaches that conventional motors to rotary body 55 (col. 10, line 30-31), reads on the instant claim.

9. Regarding claim 9, the rotary body 55 is connected to ground (col. 10, line 6-7) and a plurality of static electrodes 72 are positioned along the length of rotary body 55 to provide electric field (col. 10, line 46-53), reads on the instant claim.

10. Regarding claim 11, Yan et al disclose an electrostatic classifier and separator including (1) a housing 17 (i.e. chamber) including opening 20 (i.e. inlet) for receiving particulates materials 16 (Figure 1; col. 7, line 63-65) and gap 25 (i.e. outlet) for directing particulate materials into containers 27 (Figure 1; col. 7, line 47-50); and (2) a

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first drum separator section 14 having a rotate body 55 for separating and charging particles (Figure 3B; col. 10, line 5-10).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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14. Claims 3, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan et al (U.S. 6,797,908) as applied to claim 1 above.

15. Regarding claim 3, Yan does not specifically disclose the housing 17 being cylindrical. However, the configuration of the housing is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed chamber is significant (see M.P.E.P 2144).

16. Regarding claim 6, Yan is silent about if the splitter 18 is adjustable. However, one having ordinary skill in the art would have realized to make splitter 18 adjustable in order to effectively collect charged particles. Moreover, adjustability, where needed, is not a patentable advance (see M.P.E.P 2144).

17. Regarding claim 8, Yan does not specifically disclose the rotating speed. However, one having ordinary skill in the art would have realized to optimize rotating speed of the rotate body 55 in order to achieve desired separation of particulate materials.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yan et al (U.S. 6,797,908) as applied to claim 9 above, and further in view of Altman et al (U.S. 5,591,253).

19. Regarding claim 10, Yan teaches that the rotary body 55 is connected to ground (col. 10, line 6-7), but does not explicitly teach the wall of the housing as another electrode. However, Altman et al disclose an electrostatically enhanced separator in which the electric field is generated between walls 17 of the separating vessel 11 and a

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discharge electrode running through a vortex finders 18 (Figure 2; col. 5, line 17-21). All of the configurations are known in reference of Yan and Altman, and the combined elements as claimed would have not changed their respective functions and the combination would have yielded predictable results. Therefore, it would be obvious for one having ordinary skill in the art to utilize the wall of the housing of Yan as another electrode as suggested by Altman in order to achieve predictable results of separating charged particles within a more compact device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuyu Tai whose telephone number is 571-270-1855.

The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. T./

Examiner, Art Unit 1795

10/31/2008

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795